



Australian Bureau of Statistics

Education Services

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Resources



MAT 05 – Participation in Sport

You can download this activity, the teacher solutions and the assessment rubric as a rich text file (RTF) at the bottom of the page.

Subject Area

Mathematics

Overview

This classroom activity involves using ABS data related to participation in sport to create graphs that best represent the data. Students write a newspaper report of their findings and include the implications for future development of facilities.

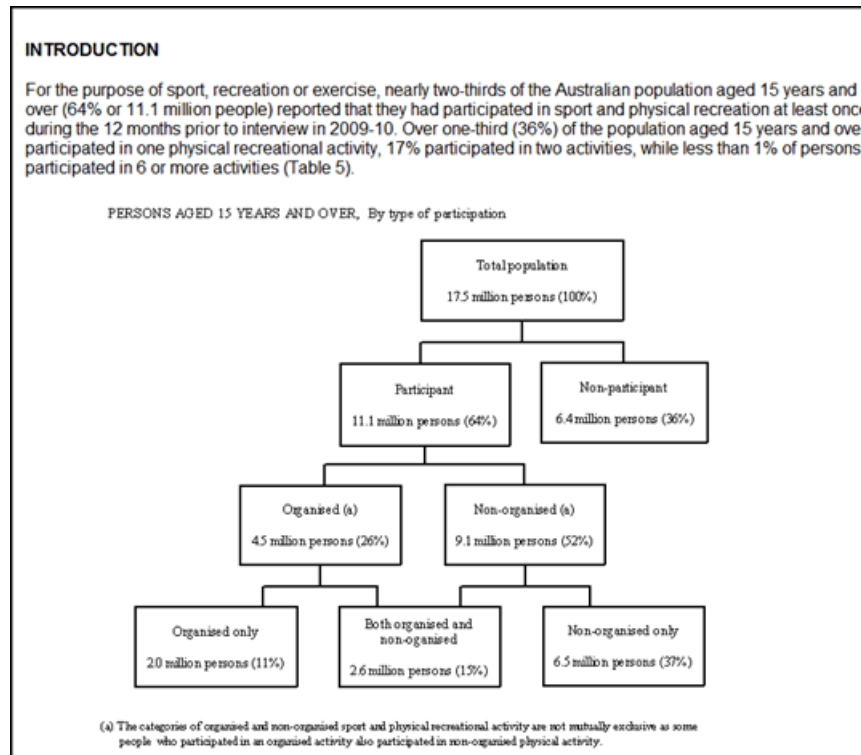
Requirements

- Computer
- Internet connection
- Copy of the Excel dataset
- Spreadsheet program or graph paper
- Pens, paper
- Attachments (see below)

Instructions

Data collected by the ABS is organised by Topic or by catalogue number where similar types of data are grouped together. Social Statistics such as Health and Education are found in the 4000s. Amongst these is found "Participation in Sport and Physical Recreation, Australia".

The following excerpt shows a breakdown of the participation in sport 2009 -10.



Source: Participation in Sport and Physical Recreation, Australia, 2009-10, cat. no. 4177.0

Information collected by the ABS is often given out in the form of media releases such as:

November 17, 1999

More Australians are participating in organised sport and physical activity, according to figures released today by the Australian Bureau of Statistics.

Almost a third (30.3%) of people aged 18 years and over participated in a sport or physical activity organised by a club or association during the 12 months prior to interview in 1998-99. This is up from 26.5% in 1996-97 and 28.3% in 1997-98.

The two top participation activities were walking and swimming. For men, golf was the most popular (15.7% participating) while for women, walking (29.5%) was clearly the most popular activity. For each of these activities, non-organised participation exceeded that of organised participation.

Participation was greater for men (62.6%) than women (56.3%). This was true for all age groups and in all States and Territories.

About three-fifths (59.4%) of all adult Australians participated in a sport or physical activity at least once during the year, whether organised by a club or association or not.

Age was a key factor in determining whether people undertook sport or physical activity. Participation declined from 80.4% for the 18-24 year age group to 36.8% for those 65 years and over.

October 24, 2000

Proportionally more men (58.5 per cent) than women (50.9 per cent) participated in sport and physical activities, and for both sexes, participation rates had decreased since 1998-99.

Participation was much more likely among younger adults than older adults, with rates ranging from 73.5 per cent for the 18-24 year age group to 33.8 per cent for the 65 years and over age group. A decrease in participation was observed for each of the age groups, with the largest decrease occurring in the 45-54 year age group (48.5 per cent in 1999-2000 compared with 56.4 per cent in 1998-99).

The ten most popular activities undertaken by Australian adults were walking (18.8 per cent participation rate), swimming (13.9 per cent), aerobics/fitness (10.5 per cent), golf (9.6 per cent), tennis (7.4 per cent), fishing (5.3 per cent), cycling (4.9 per cent), running (4.7 per cent), tenpin bowling (2.9 per cent) and netball (2.7 per cent).

Golf was the most popular activity among men (15.6 per cent participating) while walking was clearly favoured by women (23.8 per cent).

In this activity you will look at some of the data from the ABS Publication "Participation in Sports and Physical Recreation, Australia cat. No. 4177.0." This data has been collected for different age groups from 15 years old to 65 years old and over. You will choose suitable ways to display the data and write a newspaper report of your major findings.

The topics are:

- Participation in Sport Data 2005-06 by sex (given for various age groups as percentage).
- Participation in Sport Data 1998 - 2010 (given for various age groups as percentage).
- Selected Activities by age (data for 55 activities in '000s and as percentage).
- Constraints in Participation (given for various age group, in '000s and percentage).
- Motivators to Participation (given for various age groups, in '000s and percentage).

Task One: Setting up your investigation

a. Choose your investigation.

Type 1: Age

Focus on 2 distinct age groups and look at the data relating to them from all 5 sets.

OR

Type 2: Participation

Look at two of the data sets and consider all the age groups in the collection.

b. Name your investigation.

Give your investigation a title by first considering a question you want to find the answer to.

For example:

Type 1: Age

What does the data tell us about the differences in sport and physical recreation participation between 15 – 17 year olds and 45 – 54 year olds?

Type 2: Participation

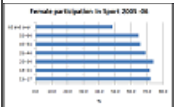
What does the data tell us about how the participation in physical activity changes over time and what factors contribute to these changes?

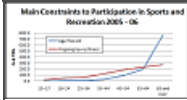
2. Decide on appropriate displays for your data.

Graphs can be an excellent way to turn data into information. Graphs present information in a way which can be quick and easy to understand. Quite often trends or comparisons are better understood in a graphical format.

You need to create a range of displays for your data by selecting at least 3 of the following to include in your report. Different graph types are used to convey different information. Your decision about what graph to use will depend on the type of investigation you are conducting.

You will also need to consider scale to allow the best view of the data as well as labelling.

Side by side column graph		To compare 2 or more attributes for 2 or more variables e.g. males with females, 15 year olds with 40 year olds.
Horizontal bar graph		A horizontal bar graph is used to compare 2 or more attributes and is a convenient display when the variable names are too long for the x axis.

Pie chart		To show relationship of parts to the whole where the whole pie represents 100% of the data. More than 6 sectors make the chart difficult to read.
Line Graph		To display a relationship between 2 numerical variables, often one of them is time.

Task Two: Considering your results

3. What stories do your graphs tell about the data?

Write a newspaper report of the major findings from your graphs.

- Include a headline and
- Include examples of the graphs as evidence. Use a system of numbering the graphs e.g. **GRAPH 1,2,3** or **FIGURE 1,2,3** and include the source of the data.
- If possible suggest reasons for your results.
- Include how your results could be used in improving the provision of sports and physical recreation services in the future.
- You may wish to include fictional quotes from 'experts' etc to make your report appear more realistic.
- Try and make sure that your article is interesting to read by including interesting or unusual results and varying your sentence construction. Hint: you might get some ideas from the ABS media releases on pages 1 and 2.

References

Note: Links to ABS publications are to the most recent release. Previous releases can be accessed by selecting the 'Past & Future Releases' tab.

Participation in Sports and Physical Recreation, Australia, 2005-06 (cat. no. 4177.0)

Statistics - A Powerful Edge, Australia, 1994 (cat. no. 1331.0)

Downloads

Student Worksheet

RTF

Dataset

.xls

Teacher Solutions

RTF

Assessment Rubric

RTF

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